

Ability to Trace Migrant Farmworkers Ten Years After Initial Identification in a Northern State (Wisconsin)

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Background Migrant farmworkers have rarely been included in epidemiologic studies. To assess the feasibility of following farmworkers over extended periods, a critical feature of many study designs, we attempted to trace a sample of Mexican-American farmworkers identified in a clinic in Wisconsin.

Methods We randomly chose 100 farmworkers from a migrant health center registration list for 1984–85. In 1995, we searched recent clinic records, made telephone calls, and visited migrant camps to find these farmworkers in Wisconsin during the growing season. We also attempted to find 46 farmworkers at their homes in southwest Texas over a two-week period in 1996 using the address listed in the clinic records, local phone books, and conversations with next-door neighbors.

Results Although 25 farmworkers had reregistered at the clinic in recent years, we found only 6 of them in Wisconsin in 1995. In southwest Texas, we either located or ascertained information about the vital status of 25 of the 46 farmworkers (54%).

Conclusions Tracing efforts must include extensive contacts in farmworkers' home states and must incorporate a variety of information sources. Tracing farmworkers in epidemiologic studies appears to be feasible but requires more intensive methods over longer periods of time than those used in this study. *Am. J. Ind. Med.* 40:592–595, 2001. © 2001 Wiley-Liss, Inc

KEY WORDS: data collection; cohort studies; tracing; migrants; Mexican-Americans; agriculture; Wisconsin; Texas

INTRODUCTION

Latinos are the fastest growing ethnic population in the United States and are expected to be the largest ethnic

group by the year 2000 [Aguirre-Molina and Molina, 1994]. In some parts of the U.S., many Latinos are employed in agriculture and may be exposed to potentially carcinogenic pesticides. About 80% of the estimated 4 million migrant farmworkers in the United States are Latino [Friedman-Jiménez and Ortiz, 1994]. Because of their relatively high rates of mobility, poverty, ruralness, foreign citizenship, and foreign language, there have been few epidemiologic studies of cancer and very few on other chronic diseases among migrant farmworkers.

Conducting longitudinal studies of cancer and other chronic diseases among migrant farmworkers requires the ability to trace them over long periods of time. The purpose of this study was to assess the feasibility of identifying migrant farmworkers in a state to which they have migrated and tracing them over an extended period. As of 1990, it was

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estimated that there were 8,000 migrant and seasonal agricultural workers, including family members, in Wisconsin [Migrant Health Program, 1990]. Nearly all are of Mexican-American heritage and most have permanent homes in Texas. The economic activity in Wisconsin includes field work with vegetables (mostly cucumbers, celery, and onions), Christmas tree farms, and vegetable canning factories. Many farmworkers and their families who come to Wisconsin receive primary health care from Family Health/La Clinica de los Campesinos, Wisconsin's only migrant health center, founded in 1972. Each year all farmworkers who come to work in Wisconsin are invited to register (or reregister) themselves and their dependents with La Clinica for potential use of services at the clinic or at other facilities through a voucher program. About 70% of the farmworkers in the State are registered at La Clinica. About one-third of registrants in 1993 received health care at La Clinica during their 1993 stay in Wisconsin.

MATERIALS AND METHODS

From the La Clinica de los Campesinos registration list for 1984–85, the oldest list available, we obtained 5,154 names. We reduced the list to 2,845 eligible persons who were 16 or older on July 1, 1985 and were recorded as a migrant or seasonal farmworker at that time. A random selection procedure in SAS was used to choose 100 names. The 1984–85 registration records provided the name, gender, date of birth, housing camp in 1985, and last known address for the 100 farmworkers in the sample.

The first step in the tracing process was to search La Clinica's current registrant computerized database (1992+) and paper medical records (1990+) to seek more recent information on the 100 sampled individuals or their family members. From the clinic's current records, information was potentially available on name, gender, date of birth, housing camp in 1995, last known address, telephone number, next of kin, and marital status.

We used the most recent information available on telephone number and housing camp to attempt to find each subject in Wisconsin during the 1995 growing season (spring to fall). If we did not find the farmworker in Wisconsin, we searched for the subject in his/her home state. To do this, we first sent letters in Spanish in "Address Correction Requested" envelopes to invite their participation in the study. We also selected one region, southwest Texas, to test the success of more intensive tracing efforts. Southwest Texas was the last known address of 46 farmworkers, more than any other region. We subcontracted with Technology & Communications Gateway, Inc. of El Paso, Texas, to look for these 46 farmworkers over a two-week period in April 1996. Using the most recent addresses that were available from La Clinica records, four Spanish-speaking interviewers visited a dozen Texas cities to attempt

to locate these farmworkers. If the person could not be located at the address listed in the clinic's records, the interviewers checked phone books and talked to next-door neighbors.

Finally, for all subjects who had not been located using the methods discussed above, we phoned the 1984–85 employers using housing camp codes from the La Clinica registration list. Almost all of the growers and canneries cooperated by searching their files for information. The canneries kept records the longest, as far back as 1982. We asked the employers if they had any records or memory of the subject or his/her family members, the last known address and phone number of the subject or family, and any other information that might help us locate them.

We developed a 19-item questionnaire to interview successfully traced subjects. The instrument was translated from English to Spanish at La Clinica and was administered in the home or employer-owned housing camp by a bilingual interviewer. Questions covered work history, health, and demographics. The wording and order of questions benefited from focus groups that were held in 1992, in conjunction with a separate project, with 55 Mexican-American migrant agricultural workers in central Wisconsin [Lantz et al., 1994].

This study was reviewed by the board of directors of La Clinica and approved by the Institutional Review Boards of Marshfield Clinic, Marshfield, Wisconsin and the National Cancer Institute.

RESULTS

The sample of 100 farmworkers included 50 men and 50 women. In 1985, the year that they were first identified in La Clinica's records, 29% of the farmworkers were 19 years old or younger (Table I). Their home base states were Texas ($n = 79$), Wisconsin ($n = 13$), Florida ($n = 4$), and other ($n = 4$).

Twenty-five of the 100 farmworkers were found in La Clinica's more recent administrative or medical records, indicating that they had been reregistered at the clinic between 1990 and 1995. Using information on housing

TABLE I. Age and Sex of 100 Wisconsin Migrant Farmworkers on January 1, 1985

Age in years	Male	Female	Total
15–19	14	15	29
20–29	17	14	31
30–39	8	5	13
40–49	5	9	14
50–59	5	4	9
60–69	1	3	4
Total	50	50	100

TABLE II. Results of Tracing Efforts of 100 Wisconsin Migrant Farmworkers in Wisconsin and Southwest Texas

State	Number	Percent
Wisconsin	100	100
Successfully traced ^a	6	6
Southwest Texas	46	100
Successfully traced ^a	20	43
Tracing partially successful ^b	5	11
Total vital status determined	25	54

^aLocation and vital status of farmworker were ascertained.

^bSome information about the location and vital status of the farmworker was obtained from neighbors. Due to resource limitations, no further attempts were made to locate or verify the vital status of the farmworker.

camp address and phone number, we located and interviewed five farmworkers during the 1995 growing season in Wisconsin. The son of a sixth subject was located and provided the current phone number of the farmworker, but the farmworker was not interviewed. All of the farmworkers who were located in Wisconsin (Table II) were among the 25 who had been reregistered at the clinic in recent years.

We sent letters to the home addresses of the 95 farmworkers who had not been interviewed in Wisconsin. The postal service returned 21 as undeliverable. Three people returned the postcard we had enclosed.

Of the 46 people we searched for in southwest Texas, 10 were among those that had been reregistered at La Clinica after 1990; therefore, for most of these farmworkers, we had information only from 1985. By visiting homes, checking phone books, and talking to next-door neighbors, we were able to either locate or ascertain additional information about the current location of 25 farmworkers over a two-week period. Twelve of the 25 farmworkers were found and interviewed. Another two farmworkers were found and they agreed to be interviewed, but one denied having ever gone to Wisconsin and another had a birthdate that differed from the one listed in La Clinica's records. Six farmworkers were successfully traced but were not interviewed for a variety of reasons (one farmworker was deceased, one refused to be interviewed, two were in jail, and two were living outside of the study area). For five farmworkers, we found the address listed in La Clinica's records and obtained information about the farmworker or his family from neighbors, but we did not attempt to locate the farmworker for an interview. For the remaining 21 farmworkers, either the La Clinica addresses could not be located, or the addresses were located but the current residents and neighbors had no knowledge of the farmworker. Phone calls to 1985 employers yielded addresses for two of these farmworkers, but we did not have the resources to determine whether the addresses were accurate or to

attempt to contact the farmworkers. Overall, we were able to reasonably determine the current vital status of 54% of the 46 farmworkers in southwest Texas.

We interviewed a total of 17 farmworkers, including 8 males and 9 females, 5 in Wisconsin and 12 in southwest Texas. The mean age of the 17 interviewees was 31.5 years, compared to 31.1 years for the other 83 subjects. All of the interviewees were Mexican-American. Twelve were born in the United States; 13 were U.S. citizens, and the others were citizens of Mexico. All 17 reported having done migrant farmwork for an average of 15 years each (range = 5–45 years). Five individuals were still doing farmwork at the time of interview. One respondent reported a medical diagnosis of cancer. Ten described their own health as excellent or good.

DISCUSSION

This study evaluated the feasibility of tracing farmworkers over an extended period. We identified 100 farmworkers who had worked in Wisconsin in 1985 and registered at a migrant health center. Only a small fraction of these people (13%) lived in Wisconsin; the majority lived in Texas (79%). In 1995, we attempted to find these farmworkers first during the growing season in Wisconsin and then in their home state.

We located only 6 of the 100 farmworkers in Wisconsin during the 1995 growing season. There are several possible explanations for this. First, a substantial number probably stopped migrating to Wisconsin between 1985 and 1995. Farmworkers as a group are quite young and perform farmwork for only a few years. A U.S. Department of Labor survey of farmworkers found that only one in four white farmworkers, and one in two Mexican-American farmworkers, planned to continue doing farmwork for more than five years [Mines et al., 1997]. Less than one third of the people that we interviewed stated that they were still doing migrant farmwork at the time of the interview. Still, 19 of the 25 farmworkers who returned to Wisconsin and reregistered at the clinic between 1990 and 1995 were not found. Some of them could have migrated to Wisconsin between 1990 and 1994 but not in 1995, and others might not have been found because our tracing efforts in Wisconsin were limited. In addition to the 25 farmworkers who were found in the clinic's recent records, others might have returned to Wisconsin without reregistering at the clinic, or might have reregistered under a different name, in which case they would have been difficult to trace.

Efforts at finding the farmworkers in their home state, using more intensive tracing methods, were more successful. Of 46 farmworkers whose home addresses were in southwest Texas, we were able to either locate or ascertain the vital status of 25 (54%), although due to resource and time limits we interviewed only 12. We traced these

farmworkers over a period of two weeks by looking for the home address listed in La Clinica records, checking phone books, and talking to next-door neighbors. Our success would likely have been better if we had extended the tracing period beyond two weeks and made use of other sources of information. We had no access to vital records, voter lists, driver's license lists, schools, post offices, tax offices, credit companies, utility companies, churches, the Veteran's Administration, Social Security numbers, the Immigration and Naturalization Service, or the Mexican Consul. It also would have been beneficial to hire local community members to conduct the tracing in each city, rather than using field staff from El Paso.

Neither sending letters to farmworkers' home addresses nor calling 1984–85 employers resulted in our finding useful information on more than a few of the farmworkers. The postal service delivered 74 of the 95 letters that we sent, of which three people returned the postcards; there is no way of knowing what happened to the other 71 letters that were delivered. Phone calls were made to previous employers of 76 subjects at the end of the study (we excluded 17 subjects that had already been interviewed and 7 subjects that we had already found but could not interview). We obtained only three addresses from previous employers and did not attempt to locate the farmworkers because of time and resource constraints.

Various authors have suggested methods to trace study subjects [Wilcox, 1965; Clarridge et al., 1977; Pirie et al., 1989; Hahn et al., 1990; Marin and VanOss Marin, 1991]. Few of these techniques are applicable to farmworkers identified away from their home states, however. This study indicates that tracing efforts must extend beyond the Northern states because farmworkers change migration patterns and tend to be actively engaged in farmwork for relatively short periods of time. Searching for farmworkers in their home states is critical. Although some farmworkers do not have a permanent or stable residence, most do have a permanent home and family or acquaintances in a city or town in which they have lived. We had moderate success tracing farmworkers in their home state in southwest Texas, even though this effort lasted for only two weeks, was based on limited information, and had local staff from just one area in Texas. Tracing farmworkers in epidemiologic studies appears to be feasible but requires more intensive methods over longer periods of time than those used in this study.

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